

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-16. (canceled)

17. (currently amended) A projection display screen having a diffusion film for diffusing light incoming from an angular range of diffusion of an incident light into an angular range of diffusion of an outgoing light, wherein the diffusion film comprises a structure in which a plurality of layers, each of ~~which~~ said plurality of layers has a different refractive index from ~~the~~ adjacent layers, and an interface between the adjacent layers is substantially in a wavy shape, said plurality of layers constitute ~~constituting~~ a plurality of step index optical waveguides ~~of a step index type forms that form~~ stripes arranged in ~~the~~ a banded state in a direction in a film plane and ~~extends that extend in the~~ a direction of ~~the~~ a layer inclination angle which is distributed substantially in a top hat shape within a predetermined angular range with respect to ~~the~~ a direction of ~~the~~ film thickness.

18. (currently amended) A projection display screen having a diffusion film for diffusing light incoming from an angular range of diffusion of an incident light into an angular range of diffusion of an outgoing light, wherein the diffusion

film comprises a structure in which a plurality of layers, each of ~~which~~ said plurality of layers has a different refractive index from ~~the~~ adjacent layers, and an interface between the adjacent layers is substantially in a wavy shape, said plurality of layers constitute ~~constituting~~ a plurality of step index optical waveguides ~~of a step index type forms that form~~ stripes arranged in ~~the a~~ banded state in a direction in a film plane, one or more peaks are included within a predetermined angular range with respect to ~~the a~~ direction of ~~the~~ film thickness, and the plurality of layers extends in ~~the a~~ direction of ~~the a~~ layer inclination angle which is distributed substantially in a top hat shape excepting said peaks within the predetermined angular range.

19-20. (canceled)

21. (currently amended) A projection display screen having a diffusion film for diffusing light incoming from an angular range of diffusion of an incident light into an angular range of diffusion of an outgoing light, wherein the diffusion film comprises a structure in which a plurality of layers constituting optical wave guides having a gradient refractive index distribution in one layer that brings out a light-collecting property in the direction of the layer thickness extends in ~~the a~~ direction of ~~the~~ film thickness or in the direction inclined from this direction with a layer length distributed within a predetermined range substantially in ~~the a~~

top hat shape in a portion in the direction of the film thickness.

22. (canceled)

23. (currently amended) A screen using a film having a function of converting a light-outgoing direction comprising a diffusion film for diffusing light incoming from an angular range of diffusion of the incident light into an angular range of diffusion of an outgoing light; and a light-outgoing direction converting film for causing light incoming from an oblique direction to go out toward the front, wherein the light-outgoing direction converting film comprises a structure in which a plurality of layers, each of which has a curved shape and has a different reflective index from the adjacent layers, forming a plurality of step index type optical waveguides is arranged in a banded state in the direction in a film plane, and extends so as to be bent with respect to ~~the~~ a direction of ~~the~~ film thickness.

24. (currently amended) A screen using a film having a function of converting a light-outgoing direction comprising a diffusion film for diffusing light incoming from an angular range of diffusion of the incident light into an angular range of diffusion of an outgoing light; and a light-outgoing direction converting film for causing light incoming from an oblique direction to go out toward the front, wherein the light-outgoing direction converting film comprises a structure in which a plurality of layers forming optical waveguides having a curved

shape and having a gradient refractive index distribution of
~~refractive indexes in one layer,~~ which brings out a light-
 collecting property in the direction of the layer thickness is
 arranged in a banded state in the direction in a film plane, and
 extend so as to be bent with respect to the direction of the film
 thickness.

25. (currently amended) A screen using a film having a
 function of converting a light-outgoing direction comprising a
 diffusion film for diffusing light incoming from an angular range
 of diffusion of the incident light into an angular range of
 diffusion of an outgoing light; and a light-outgoing direction
 converting film for causing light incoming from an oblique
 direction to go out toward the front, wherein the light-outgoing
 direction converting film comprises a structure in which the
 structure according to claim 23 and a structure in which ~~a~~ the
 plurality of layers forming optical waveguides having a curved
shape and having a gradient refractive index distribution of
~~refractive indexes in one layer,~~ which brings out a light-
 collecting property in the direction of the layer thickness is
 arranged in a banded state in the direction in a film plane, and
 extend so as to be bent with respect to the direction of the film
 thickness are mixed in one or both of the film thickness direction
 and in the direction in the film plane.

26. (previously presented) The screen using a film
 having a function of converting a light-outgoing direction

according to claim 23, wherein the angular range of diffusion of the incident light of the diffusing film matches the outgoing angular range of the light-outgoing direction converting film.

27. (currently amended) A screen having a light-outgoing direction converting/diffusing film that causes incident light from an oblique direction to diffuse and go out toward the front direction, wherein the light-outgoing direction converting/diffusing film comprises a structure in which a plurality of layers, each of ~~which~~ plurality of layers has different refractive index from ~~the~~ adjacent layers, each of said plurality of layers has a curved shape and an interface of the adjacent layers is substantially in a wavy shape, and forming a plurality of step index type optical waveguides is arranged in a banded state in the direction in a film plane, and extends so as to be bent with respect to the direction of the film thickness, and layer inclination angles which are distributed substantially in a top hat shape.

28. (currently amended) A screen having a light-outgoing direction converting/diffusing film that causes incident light from an oblique direction to diffuse and go out toward the front direction, wherein the light-outgoing direction converting/diffusing film comprises a structure in which a plurality of layers forming optical waveguides having a curved shape and having a gradient refractive index distribution of ~~refractive indexes in one layer,~~ which brings out a light-

collecting property in ~~the~~ a direction of ~~the~~ layer thickness is arranged in a banded state in the direction in a film plane, and extends so as to be bent with respect to ~~the~~ a direction of ~~the~~ film thickness, and ~~the~~ a length of the layers are distributed substantially in a top hat shape.

29. (currently amended) The screen having a light-outgoing direction converting/diffusing film that causes incident light from an oblique direction to diffuse and go out toward the front direction, wherein the light-outgoing direction converting/diffusing film comprises a structure (A) in which the structure according to claim 27 and a structure (B) in which a the plurality of layers forming optical waveguides having a curved shape and having a gradient refractive index distribution ~~of refractive indexes~~ in one layer, which brings out a light-collecting property in the direction of the layer thickness is arranged in a banded state in the direction in a film plane, and extends so as to be bent with respect to the direction of the film thickness, and the length of the layers are distributed substantially in a top hat shape are mixed in one or both of the film thickness direction and in the direction of the film plane, or the structure (A) and the structure (B) are fused with each other.

30. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to

claim 23; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

31. (previously presented) The optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 26; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

32-33. (canceled)

34. (previously presented) The screen using a film having a function of converting a light-outgoing direction according to claim 24, wherein the angular range of diffusion of the incident light of the diffusing film matches the outgoing angular range of the light-outgoing direction converting film.

35. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 24; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

36. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 25; a projector which emits an incident light to the screen,

wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

37. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 27; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

38. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 28; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

39. (previously presented) An optical system for projection display system comprising a screen using a film having a function of converting a light-outgoing direction according to claim 29; a projector which emits an incident light to the screen, wherein a projector aperture and arrangement of the projector matches an angular range of incidence of the screen.

40. (previously presented) The screen using a film having a function of converting a light-outgoing direction according to claim 25, wherein the angular range of diffusion of the incident light of the diffusing film matches the outgoing angular range of the light-outgoing direction converting film.

41. (previously presented) A projection display screen having a diffusion film for diffusing light incoming from an angular range of diffusion of an incident light into an angular range of diffusion of an outgoing light, wherein the diffusion film comprises a structure in which a portion having a structure (A1) which is the same as the structure of the diffusion film according to claim 17 and a portion having a structure (B1) in which a plurality of layers constituting optical wave guides having a refractive index distribution that brings out a light-collecting property in the direction of the layer thickness extends in the direction of the film thickness or in the direction inclined from this direction with a layer length distributed within a predetermined range substantially in the top hat shape in a portion in the direction of the film thickness, are mixed in the direction of the film thickness or in the direction in the film plane, or, a structure in which the structure (A1) and the structure (B1) are fused with each other.

42. (previously presented) A projection display screen having a diffusion film for diffusing light incoming from an angular range of diffusion of an incident light into an angular range of diffusion of an outgoing light, wherein the diffusion film comprises a structure in which a portion having a structure (A2) which is the same as the structure of the diffusion film according to claim 18 and a portion having a structure (B1) in which a plurality of layers constituting optical wave guides

having a refractive index distribution that brings out a light-collecting property in the direction of the layer thickness extends in the direction of the film thickness or in the direction inclined from this direction with a layer length distributed within a predetermined range substantially in the top hat shape in a portion in the direction of the film thickness, are mixed in the direction of the film thickness or in the direction in the film plane, or, a structure in which the structure (A2) and the structure (B1) are fused with each other.